**3GPP TSG-RAN WG2 Meeting #116-e *R2-2111424***

**Electronic Meeting, 1st – 12th November, 2021**

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **38.331** | **CR** | **2815** | **rev** | **1** | **Current version:** | **16.6.0** |  |
|  |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* |
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| ***Proposed change affects:*** | UICC apps |  | ME | **x** | Radio Access Network | **x** | Core Network |  |

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| ***Title:***  | Miscellaneous corrections on TS 38.331 |
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| ***Source to WG:*** | Huawei, HiSilicon, Qualcomm, CATT, MediaTek, ZTE, Sanechips, Nokia, Nokia Shanghai Bell, vivo |
| ***Source to TSG:*** | R2 |
|  |  |
| ***Work item code:*** | 5G\_V2X\_NRSL-Core |  | ***Date:*** | 2021-11-12 |
|  |  |  |  |  |
| ***Category:*** | F |  | ***Release:*** | Rel-16 |
|  | *Use one of the following categories:****F*** *(correction)****A*** *(mirror corresponding to a change in an earlier release)****B*** *(addition of feature),* ***C*** *(functional modification of feature)****D*** *(editorial modification)*Detailed explanations of the above categories canbe found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | *Use one of the following releases:Rel-8 (Release 8)Rel-9 (Release 9)Rel-10 (Release 10)Rel-11 (Release 11)…Rel-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* |
|  |  |
| ***Reason for change:*** | 1. In the LS R1-2108393 from RAN1, RAN2 is requested to capture following RAN1 agreement on sidelink resource allocation mode 2 that

A UE is expected to be (pre-)configured with a set *sl-ResourceReservePeriod* containing value of 0 ms Accordingly, in field description of *sl-ResourceReservePeriodList* in IE *SL-ResourcePool,* it should be clarified that in case Mode 2 is configured, at least value 0ms should be included in the list. 1. Some editorial errors still exist.
2. This change corrects a mismatch between RRC and MAC specification wrt the information element sl-HARQ-FeedbackEnabled. As discussed in R2-2109804 the IE needs to be mandatory present although it is defined as being optional in the current RRC specification. However since the required ASN.1 change is not possible any longer, since Rel-16 ASN.1 is frozen, a change in the field description is proposed in this CR. The modified field description shall clarify that sl-HARQ-FeedbackEnabled is always present.
3. Issue on misaligned field naming between RRC and RLC specifications:

According to current TS 38.331, all the SL RLC parameters in the *SL-RLC-Config* are named with prefix “*sl-*”, i.e., *sl-MaxRetxThreshold*, *sl-PollByte, sl-PollPDU* etc. However, when referring to the latest TS 38.322, the above SL RLC parameters cannot be found at all. Specifically, in TS 38.322 related NR SL communication procedures using these parameters are referring to the corresponding Uu subclauses where parameters with legacy Uu names (without such “*sl-*” suffix) are used. In other words, there is misalignment about the filed naming between RRC and RLC specifications.It is also noticed that during Rel-16 ASN.1 review, the similar naming misalignment issue was previously detected also to the SL PDCP parameters *sl-DiscardTimer* and *sl-OutOfOrderDelivery* in TS 38.323, and the final solution was to make some clarifications in the *SL-PDCP-Config* field descriptions in TS 38.331 as follows (meaning that the parameters with “*sl-*” prefix just corresponds to the existing parameter used with legacy Uu name, when the related Uu PDCP procedure is applied for NR SL communication) .

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| --- |
| ***sl-DiscardTimer***Value in ms of *discardTimer* specified in TS 38.323 [5]. Value ms50 corresponds to 50 ms, value ms100 corresponds to 100 ms and so on***sl-OutOfOrderDelivery***Indicates whether or not *outOfOrderDelivery* specified in TS 38.323 [5] is configured. This field should be either always present or always absent, after the radio bearer is established. |

Therefore, similar way to *SL-PDCP-Config* can be reused here to address this naming misalignment issue to the *SL-RLC-Config*.1. Issue on missing RLC configuration parameters for specified SL-SRB1/2/3 configurations

In the specified SCCH configuration for SL-SRB1/2/3, RLC AM is used. However, for the detailed RLC AM configuration, only *sn-FieldLength* and *t-Reassembly* have been captured. Some Tx only or Rx only parameters are missing. These parameters are as follows according to RAN2#107 agreements on SLRB configuration.

|  |
| --- |
| Agreements4-3: T-Reassembly timer is Rx only parameter and applicable to SL broadcast, groupcast and unicast. 4-4: T-PollRetransmit timer is Tx only parameter and applicable to SL unicast.4-5: PollPDU is Tx only parameter and applicable to SL unicast. 4-6: PollByte is Tx only parameter and applicable to SL unicast.4-7: MaxRetxThreshold is Tx only parameter and applicable to SL unicast. 4-8: T-StatusProhibit timer is Rx only parameter and applicable to SL unicast. |

Note that for the specified radio bearer configurations, no matter SL-SRB/SL-DRB configurations specified in 9.1.1.4/5 or default Uu SRB configurations in 9.2.1, how the parameter values are set requires to be specified for all necessary radio bearer parameters, irrespective of whether using a specified value or up to UE implementation. Therefore, above missing parameters need to be added to the tables for the specified SL-SRB configurations. |
|  |  |
| ***Summary of change:*** | 1. In IE *SL-ResourcePool*, add the description “The value ms0 is always configured” to the field description of *sl-ResourceReservePeriodList*.
2. Fix the editorial errors.
3. In the field description for sl-HARQ-FeedbackEnabled in section 6.3.5, removed the statement “if present” and add statement “Network always includes this field”.
4. In 6.3.5, in the field descriptions of SL-RLC-Config, clarify that the configured RLC parameters for NR SL are corresponding to those for Uu named without suffix “sl-” in TS 38.322.
5. In 9.1.1.4, add some missing parameters (i.e., t-PollRetransmit, pollPDU, pollByte, maxRetxThreshold, t-StatusProhibit) in RLC configuration for SL-SRB1/2/3, and clarify their values are up to UE implementation.

**Impact analysis**Impacted 5G architecture options:NR SA, NR-DC, NE-DCImpacted functionalitySidelink RRCInter-operability:If the network is implemented according to this CR while the UE is not, there is no inter-operability issue.If the UE is implemented according to this CR while the network is not, there is no inter-operability issue.If one UE is implemented according to this CR while the other UE is not, there is no inter-operability issue. |
|  |  |
| ***Consequences if not approved:*** | 1. RAN2 specification does not align with the RAN1 agreement.
2. Some editorial errors still exist.
3. If a sidelink logical channel is configured without the IE sl-HARQ-FeedbackEnabled (i.e. the IE is not present or has no value) then the MAC layer can according to clause 5.22.1.1 in TS38.321, for such a logical channel (without the IE) “select any pool of resources among the pools of resources”, so PSFCH does not need to be configured in the pool. However, according to 5.22.1.4.1.2 in TS38.321, such a sidelink logical channel (without the IE) cannot be selected unless the pool is configured with PSFCH resources. So, strictly following the text in TS38.321, a UE may end up selecting a resource pool without PSFCH resources for this logical channel but then being unable to select this logical channel for transmission in that pool.
4. The SL RLC parameter configuration in RLC specification TS 38.322 is not aligned with RRC specification TS 38.331. Also, the specified SL RLC configuration is not complete for SL-SRB1/2/3 in TS 38.331.
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| ***Clauses affected:*** | 6.3.5, 6.6.2, 6.4, 9.1.1.4, 9.1.1.5, 9.3 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **x** |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** |  | **X** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

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| FIRST CHANGE |

6.3.5 Sidelink information elements

– *SL-LogicalChannelConfig*

The IE *SL*-*LogicalChannelConfig* is used to configure the sidelink logical channel parameters.

***SL-LogicalChannelConfig* information element**

-- ASN1START

-- TAG-SL-LOGICALCHANNELCONFIG-START

SL-LogicalChannelConfig-r16 ::= SEQUENCE {

 sl-Priority-r16 INTEGER (1..8),

 sl-PrioritisedBitRate-r16 ENUMERATED {kBps0, kBps8, kBps16, kBps32, kBps64, kBps128, kBps256, kBps512,

 kBps1024, kBps2048, kBps4096, kBps8192, kBps16384, kBps32768, kBps65536, infinity},

 sl-BucketSizeDuration-r16 ENUMERATED {ms5, ms10, ms20, ms50, ms100, ms150, ms300, ms500, ms1000,

 spare7, spare6, spare5, spare4, spare3,spare2, spare1},

 sl-ConfiguredGrantType1Allowed-r16 ENUMERATED {true} OPTIONAL, -- Need R

 sl-HARQ-FeedbackEnabled-r16 ENUMERATED {enabled, disabled } OPTIONAL, -- Need R

 sl-AllowedCG-List-r16 SEQUENCE (SIZE (0.. maxNrofCG-SL-1-r16)) OF SL-ConfigIndexCG-r16

 OPTIONAL, -- Need R

 sl-AllowedSCS-List-r16 SEQUENCE (SIZE (1..maxSCSs)) OF SubcarrierSpacing OPTIONAL, -- Need R

 sl-MaxPUSCH-Duration-r16 ENUMERATED {ms0p02, ms0p04, ms0p0625, ms0p125, ms0p25, ms0p5, spare2, spare1}

 OPTIONAL, -- Need R

 sl-LogicalChannelGroup-r16 INTEGER (0..maxLCG-ID) OPTIONAL, -- Need R

 sl-SchedulingRequestId-r16 SchedulingRequestId OPTIONAL, -- Need R

 sl-LogicalChannelSR-DelayTimerApplied-r16 BOOLEAN OPTIONAL, -- Need R

 ...

}

-- TAG-SL-LOGICALCHANNELCONFIG-STOP

-- ASN1STOP

|  |
| --- |
| ***SL-LogicalChannelConfig field* descriptions** |
| ***sl-AllowedCG-List***This restriction applies only when the SL grant is a configured grant. If present, SL MAC SDUs from this logical channel can only be mapped to the indicated configured grant configuration. If the size of the sequence is zero, then SL MAC SDUs from this logical channel cannot be mapped to any configured grant configurations. If the field is not present, SL MAC SDUs from this logical channel can be mapped to any configured grant configurations. If the field *sl-ConfiguredGrantType1Allowed* is present, only those sidelink configured grant type 1 configurations indicated in this sequence are allowed for use by this sidelink logical channel; otherwise, this sequence shall not include any sidelink configured grant type 1 configuration. Corresponds to "sl-AllowedCG-List" as specified in TS 38.321 [3]. |
| ***sl-AllowedSCS-List***If present, indicate the numerology of UL-SCH resources that this sidelink logical channel is mapped to, when checking the SR trigger condition. Corresponds to ' sl-AllowedSCS-List' in TS 38.321 [3]. |
| ***sl-BucketSizeDuration***Value in ms. *ms5* corresponds to 5 ms, value *ms10* corresponds to 10 ms, and so on. |
| ***sl-ConfiguredGrantType1Allowed***If present and set to true, or if the capability *lcp-RestrictionSidelink* as specified in TS 38.306 [26] is not indicated, SL MAC SDUs from this sidelink logical channel can be transmitted on a sidelink configured grant type 1. Otherwise, SL MAC SDUs from this logical channel cannot be transmitted on a sidelink configured grant type 1. Corresponds to 'sl-configuredGrantType1Allowed' in TS 38.321 [3]. |
| ***sl-HARQ-FeedbackEnabled***Network always includes this field. It indicates the HARQ feedback enabled/disabled restriction in LCP for this sidelink logical channel. If set to *enabled*, the sidelink logical channel will be multiplexed only with a logical channel which enabling the HARQ feedback. If set to *disabled*, the sidelink logical channel cannot be multiplexed with a logical channel which enabling the HARQ feedback. Corresponds to 'sl-HARQ-FeedbackEnabled' in TS 38.321 [3]. If this field of at least one sidelink logical channel for the UE is set to enabled, *sl-PSFCH-Config* should be mandatory present in at least one of the *SL-ResourcePool*. |
| ***sl-LogicalChannelGroup***ID of the sidelink logical channel group, as specified in TS 38.321 [3], which the sidelink logical channel belongs to. |
| ***sl-LogicalChannelSR-DelayTimerApplied***Indicates whether to apply the delay timer for SR transmission for this sidelink logical channel. Set to false if *logicalChannelSR-DelayTimer* is not included in *sl-BSR-Config*. |
| ***sl-MaxPUSCH-Duration***If present, indicate the maximum PUSCH duration of UL-SCH resources that this sidelink logical channel is mapped to, when checking the SR trigger condition. Corresponds to "sl-MaxPUSCH-Duration" in TS 38.321 [3]. |
| ***sl-PrioritisedBitRate***Value in kiloBytes/s. Value *kBps0* corresponds to 0 kiloBytes/s, value *kBps8* corresponds to 8 kiloBytes/s, value *kBps16* corresponds to 16 kiloBytes/s, and so on. |
| ***sl-Priority***Sidelink logical channel priority, as specified in TS 38.321 [3]. |
| ***sl-SchedulingRequestId***If present, it indicates the scheduling request configuration applicable for this sidelink logical channel, as specified in TS 38.321 [3]. |

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| NEXT CHANGE |

– *SL-MeasConfigInfo*

The IE *SL*-*MeasConfigInfo* is used to set RSRP measurement configurations for unicast destinations.

***SL-MeasConfigInfo* information element**

-- ASN1START

-- TAG-SL-MEASCONFIGINFO-START

SL-MeasConfigInfo-r16 ::= SEQUENCE {

 sl-DestinationIndex-r16 SL-DestinationIndex-r16,

 sl-MeasConfig-r16 SL-MeasConfig-r16,

 ...

}

SL-MeasConfig-r16 ::= SEQUENCE {

 sl-MeasObjectToRemoveList-r16 SL-MeasObjectToRemoveList-r16 OPTIONAL, -- Need N

 sl-MeasObjectToAddModList-r16 SL-MeasObjectList-r16 OPTIONAL, -- Need N

 sl-ReportConfigToRemoveList-r16 SL-ReportConfigToRemoveList-r16 OPTIONAL, -- Need N

 sl-ReportConfigToAddModList-r16 SL-ReportConfigList-r16 OPTIONAL, -- Need N

 sl-MeasIdToRemoveList-r16 SL-MeasIdToRemoveList-r16 OPTIONAL, -- Need N

 sl-MeasIdToAddModList-r16 SL-MeasIdList-r16 OPTIONAL, -- Need N

 sl-QuantityConfig-r16 SL-QuantityConfig-r16 OPTIONAL, -- Need M

 ...

}

SL-MeasObjectToRemoveList-r16 ::= SEQUENCE (SIZE (1..maxNrofSL-ObjectId-r16)) OF SL-MeasObjectId-r16

SL-ReportConfigToRemoveList-r16 ::= SEQUENCE (SIZE (1..maxNrofSL-ReportConfigId-r16)) OF SL-ReportConfigId-r16

SL-MeasIdToRemoveList-r16 ::= SEQUENCE (SIZE (1..maxNrofSL-MeasId-r16)) OF SL-MeasId-r16

-- TAG-SL-MEASCONFIGINFO-STOP

-- ASN1STOP

| ***SL-MeasConfigInfo* field descriptions** |
| --- |
| ***sl-MeasIdToAddModList***List of sidelink measurement identities to add and/or modify. |
| ***sl-MeasIdToRemoveList***List of sidelink measurement identities to remove. |
| ***sl-MeasObjectToAddModList***List of sidelink measurement objects to add and/or modify. |
| ***sl-MeasObjectToRemoveList***List of sidelink measurement objects to remove. |
| ***sl-QuantityConfig***Indicates the layer 3 filtering coefficient for sidelink measurement. |
| ***sl-ReportConfigToAddModList***List of sidelink measurement reporting configurations to add and/or modify. |
| ***sl-ReportConfigToRemoveList***List of sidelink measurement reporting configurations to remove. |

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| NEXT CHANGE |

– *SL-ReportConfigList*

The IE *SL*-*ReportConfigList* concerns a list of SL measurement reporting configurations to add or modify for a destination.

***SL-ReportConfigList* information element**

-- ASN1START

-- TAG-SL-REPORTCONFIGLIST-START

SL-ReportConfigList-r16 ::= SEQUENCE (SIZE (1..maxNrofSL-ReportConfigId-r16)) OF SL-ReportConfigInfo-r16

SL-ReportConfigInfo-r16 ::= SEQUENCE {

 sl-ReportConfigId-r16 SL-ReportConfigId-r16,

 sl-ReportConfig-r16 SL-ReportConfig-r16,

 ...

}

SL-ReportConfigId-r16 ::= INTEGER (1..maxNrofSL-ReportConfigId-r16)

SL-ReportConfig-r16 ::= SEQUENCE {

 sl-ReportType-r16 CHOICE {

 sl-Periodical-r16 SL-PeriodicalReportConfig-r16,

 sl-EventTriggered-r16 SL-EventTriggerConfig-r16,

 ...

 },

 ...

}

SL-PeriodicalReportConfig-r16 ::= SEQUENCE {

 sl-ReportInterval-r16 ReportInterval,

 sl-ReportAmount-r16 ENUMERATED {r1, r2, r4, r8, r16, r32, r64, infinity},

 sl-ReportQuantity-r16 SL-MeasReportQuantity-r16,

 sl-RS-Type-r16 SL-RS-Type-r16,

 ...

}

SL-EventTriggerConfig-r16 ::= SEQUENCE {

 sl-EventId-r16 CHOICE {

 eventS1-r16 SEQUENCE {

 s1-Threshold-r16 SL-MeasTriggerQuantity-r16,

 sl-ReportOnLeave-r16 BOOLEAN,

 sl-Hysteresis-r16 Hysteresis,

 sl-TimeToTrigger-r16 TimeToTrigger,

 ...

 },

 eventS2-r16 SEQUENCE {

 s2-Threshold-r16 SL-MeasTriggerQuantity-r16,

 sl-ReportOnLeave-r16 BOOLEAN,

 sl-Hysteresis-r16 Hysteresis,

 sl-TimeToTrigger-r16 TimeToTrigger,

 ...

 },

 ...

 },

 sl-ReportInterval-r16 ReportInterval,

 sl-ReportAmount-r16 ENUMERATED {r1, r2, r4, r8, r16, r32, r64, infinity},

 sl-ReportQuantity-r16 SL-MeasReportQuantity-r16,

 sl-RS-Type-r16 SL-RS-Type-r16,

 ...

}

SL-MeasReportQuantity-r16 ::= CHOICE {

 sl-RSRP-r16 BOOLEAN,

 ...

}

SL-MeasTriggerQuantity-r16 ::= CHOICE {

 sl-RSRP-r16 RSRP-Range,

 ...

}

SL-RS-Type-r16 ::= ENUMERATED {dmrs, spare3, spare2, spare1}

-- TAG-SL-REPORTCONFIGLIST-STOP

-- ASN1STOP

| ***SL-ReportConfig* field descriptions** |
| --- |
| ***sl-ReportType***Type of the configured sidelink measurement report. |

| ***SL-EventTriggerConfig* field descriptions** |
| --- |
| ***sl-EventId***Choice of sidelink measurement event triggered reporting criteria. |
| ***sl-ReportAmount***Number of sidelink measurement reports applicable for *sl-EventTriggered* report type. |
| ***sl-ReportInterval***Indicates the interval between periodical reports (i.e., when *sl-ReportAmount* exceeds 1) for *sl-EventTriggered* report type. |
| ***sl-ReportOnLeave***indicates whether or not the UE shall initiate the sidelink measurement reporting procedure when the leaving condition is met for a frequency in *sl-FrequencyTriggeredList*, as specified in 5.8.10.4.1. |
| ***sl-ReportQuantity***The sidelink measurement quantities to be included in the sidelink measurement report. |
| ***sl-TimeToTrigger***Time during which specific criteria for the event needs to be met in order to trigger a sidelink measurement report. |
| ***sN-Threshold***Threshold used for events S1 and S2 specified in subclauses 5.8.10.4.2 and 5.8.10.4.3, respectively. |

| ***SL-PeriodicalReportConfig* field descriptions** |
| --- |
| ***sl-ReportAmount***Number of sidelink measurement reports applicable for *sl-Periodical* report type. |
| ***sl-ReportInterval***Indicates the interval between periodical reports (i.e., when *sl-ReportAmount* exceeds 1) for *sl-Periodical* report type. |
| ***sl-ReportQuantity***The sidelink measurement quantities to be included in the sidelink measurement report. |

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| NEXT CHANGE |

– *SL-ResourcePool*

The IE *SL-ResourcePool* specifies the configuration information for NR sidelink communication resource pool.

***SL-ResourcePool* information element**

-- ASN1START

-- TAG-SL-RESOURCEPOOL-START

SL-ResourcePool-r16 ::= SEQUENCE {

 sl-PSCCH-Config-r16 SetupRelease { SL-PSCCH-Config-r16 } OPTIONAL, -- Need M

 sl-PSSCH-Config-r16 SetupRelease { SL-PSSCH-Config-r16 } OPTIONAL, -- Need M

 sl-PSFCH-Config-r16 SetupRelease { SL-PSFCH-Config-r16 } OPTIONAL, -- Need M

 sl-SyncAllowed-r16 SL-SyncAllowed-r16 OPTIONAL, -- Need M

 sl-SubchannelSize-r16 ENUMERATED {n10, n12, n15, n20, n25, n50, n75, n100} OPTIONAL, -- Need M

 dummy INTEGER (10..160) OPTIONAL, -- Need M

 sl-StartRB-Subchannel-r16 INTEGER (0..265) OPTIONAL, -- Need M

 sl-NumSubchannel-r16 INTEGER (1..27) OPTIONAL, -- Need M

 sl-Additional-MCS-Table-r16 ENUMERATED {qam256, qam64LowSE, qam256-qam64LowSE } OPTIONAL, -- Need M

 sl-ThreshS-RSSI-CBR-r16 INTEGER (0..45) OPTIONAL, -- Need M

 sl-TimeWindowSizeCBR-r16 ENUMERATED {ms100, slot100} OPTIONAL, -- Need M

 sl-TimeWindowSizeCR-r16 ENUMERATED {ms1000, slot1000} OPTIONAL, -- Need M

 sl-PTRS-Config-r16 SL-PTRS-Config-r16 OPTIONAL, -- Need M

 sl-UE-SelectedConfigRP-r16 SL-UE-SelectedConfigRP-r16 OPTIONAL, -- Need M

 sl-RxParametersNcell-r16 SEQUENCE {

 sl-TDD-Configuration-r16 TDD-UL-DL-ConfigCommon OPTIONAL, -- Need M

 sl-SyncConfigIndex-r16 INTEGER (0..15)

 } OPTIONAL, -- Need M

 sl-ZoneConfigMCR-List-r16 SEQUENCE (SIZE (16)) OF SL-ZoneConfigMCR-r16 OPTIONAL, -- Need M

 sl-FilterCoefficient-r16 FilterCoefficient OPTIONAL, -- Need M

 sl-RB-Number-r16 INTEGER (10..275) OPTIONAL, -- Need M

 sl-PreemptionEnable-r16 ENUMERATED {enabled, pl1, pl2, pl3, pl4, pl5, pl6, pl7, pl8} OPTIONAL, -- Need R

 sl-PriorityThreshold-UL-URLLC-r16 INTEGER (1..9) OPTIONAL, -- Need M

 sl-PriorityThreshold-r16 INTEGER (1..9) OPTIONAL, -- Need M

 sl-X-Overhead-r16 ENUMERATED {n0,n3, n6, n9} OPTIONAL, -- Need S

 sl-PowerControl-r16 SL-PowerControl-r16 OPTIONAL, -- Need M

 sl-TxPercentageList-r16 SL-TxPercentageList-r16 OPTIONAL, -- Need M

 sl-MinMaxMCS-List-r16 SL-MinMaxMCS-List-r16 OPTIONAL, -- Need M

 ...,

 [[

 sl-TimeResource-r16 BIT STRING (SIZE (10..160)) OPTIONAL -- Need M

 ]]

}

SL-ZoneConfigMCR-r16 ::= SEQUENCE {

 sl-ZoneConfigMCR-Index-r16 INTEGER (0..15),

 sl-TransRange-r16 ENUMERATED {m20, m50, m80, m100, m120, m150, m180, m200, m220, m250, m270, m300, m350,

 m370, m400, m420, m450, m480, m500, m550, m600, m700, m1000, spare9, spare8,

 spare7, spare6, spare5, spare4, spare3, spare2, spare1}

 OPTIONAL, -- Need M

 sl-ZoneConfig-r16 SL-ZoneConfig-r16 OPTIONAL, -- Need M

 ...

}

SL-SyncAllowed-r16 ::= SEQUENCE {

 gnss-Sync-r16 ENUMERATED {true} OPTIONAL, -- Need R

 gnbEnb-Sync-r16 ENUMERATED {true} OPTIONAL, -- Need R

 ue-Sync-r16 ENUMERATED {true} OPTIONAL -- Need R

}

SL-PSCCH-Config-r16 ::= SEQUENCE {

 sl-TimeResourcePSCCH-r16 ENUMERATED {n2, n3} OPTIONAL, -- Need M

 sl-FreqResourcePSCCH-r16 ENUMERATED {n10,n12, n15, n20, n25} OPTIONAL, -- Need M

 sl-DMRS-ScrambleID-r16 INTEGER (0..65535) OPTIONAL, -- Need M

 sl-NumReservedBits-r16 INTEGER (2..4) OPTIONAL, -- Need M

 ...

}

SL-PSSCH-Config-r16 ::= SEQUENCE {

 sl-PSSCH-DMRS-TimePatternList-r16 SEQUENCE (SIZE (1..3)) OF INTEGER (2..4) OPTIONAL, -- Need M

 sl-BetaOffsets2ndSCI-r16 SEQUENCE (SIZE (4)) OF SL-BetaOffsets-r16 OPTIONAL, -- Need M

 sl-Scaling-r16 ENUMERATED {f0p5, f0p65, f0p8, f1} OPTIONAL, -- Need M

 ...

}

SL-PSFCH-Config-r16 ::= SEQUENCE {

 sl-PSFCH-Period-r16 ENUMERATED {sl0, sl1, sl2, sl4} OPTIONAL, -- Need M

 sl-PSFCH-RB-Set-r16 BIT STRING (SIZE (10..275)) OPTIONAL, -- Need M

 sl-NumMuxCS-Pair-r16 ENUMERATED {n1, n2, n3, n6} OPTIONAL, -- Need M

 sl-MinTimeGapPSFCH-r16 ENUMERATED {sl2, sl3} OPTIONAL, -- Need M

 sl-PSFCH-HopID-r16 INTEGER (0..1023) OPTIONAL, -- Need M

 sl-PSFCH-CandidateResourceType-r16 ENUMERATED {startSubCH, allocSubCH} OPTIONAL, -- Need M

 ...

}

SL-PTRS-Config-r16 ::= SEQUENCE {

 sl-PTRS-FreqDensity-r16 SEQUENCE (SIZE (2)) OF INTEGER (1..276) OPTIONAL, -- Need M

 sl-PTRS-TimeDensity-r16 SEQUENCE (SIZE (3)) OF INTEGER (0..29) OPTIONAL, -- Need M

 sl-PTRS-RE-Offset-r16 ENUMERATED {offset01, offset10, offset11} OPTIONAL, -- Need M

 ...

}

SL-UE-SelectedConfigRP-r16 ::= SEQUENCE {

 sl-CBR-PriorityTxConfigList-r16 SL-CBR-PriorityTxConfigList-r16 OPTIONAL, -- Need M

 sl-Thres-RSRP-List-r16 SL-Thres-RSRP-List-r16 OPTIONAL, -- Need M

 sl-MultiReserveResource-r16 ENUMERATED {enabled} OPTIONAL, -- Need M

 sl-MaxNumPerReserve-r16 ENUMERATED {n2, n3} OPTIONAL, -- Need M

 sl-SensingWindow-r16 ENUMERATED {ms100, ms1100} OPTIONAL, -- Need M

 sl-SelectionWindowList-r16 SL-SelectionWindowList-r16 OPTIONAL, -- Need M

 sl-ResourceReservePeriodList-r16 SEQUENCE (SIZE (1..16)) OF SL-ResourceReservePeriod-r16 OPTIONAL, -- Need M

 sl-RS-ForSensing-r16 ENUMERATED {pscch, pssch},

 ...,

 [[

 sl-CBR-PriorityTxConfigList-v1650 SL-CBR-PriorityTxConfigList-v1650 OPTIONAL -- Need M

 ]]

}

SL-ResourceReservePeriod-r16 ::= CHOICE {

 sl-ResourceReservePeriod1-r16 ENUMERATED {ms0, ms100, ms200, ms300, ms400, ms500, ms600, ms700, ms800, ms900, ms1000},

 sl-ResourceReservePeriod2-r16 INTEGER (1..99)

}

SL-SelectionWindowList-r16 ::= SEQUENCE (SIZE (8)) OF SL-SelectionWindowConfig-r16

SL-SelectionWindowConfig-r16 ::= SEQUENCE {

 sl-Priority-r16 INTEGER (1..8),

 sl-SelectionWindow-r16 ENUMERATED {n1, n5, n10, n20}

}

SL-TxPercentageList-r16 ::= SEQUENCE (SIZE (8)) OF SL-TxPercentageConfig-r16

SL-TxPercentageConfig-r16 ::= SEQUENCE {

 sl-Priority-r16 INTEGER (1..8),

 sl-TxPercentage-r16 ENUMERATED {p20, p35, p50}

}

SL-MinMaxMCS-List-r16 ::= SEQUENCE (SIZE (1..3)) OF SL-MinMaxMCS-Config-r16

SL-MinMaxMCS-Config-r16 ::= SEQUENCE {

 sl-MCS-Table-r16 ENUMERATED {qam64, qam256, qam64LowSE},

 sl-MinMCS-PSSCH-r16 INTEGER (0..27),

 sl-MaxMCS-PSSCH-r16 INTEGER (0..31)

}

SL-BetaOffsets-r16 ::= INTEGER (0..31)

SL-PowerControl-r16 ::= SEQUENCE {

 sl-MaxTransPower-r16 INTEGER (-30..33),

 sl-Alpha-PSSCH-PSCCH-r16 ENUMERATED {alpha0, alpha04, alpha05, alpha06, alpha07, alpha08, alpha09, alpha1} OPTIONAL, -- Need M

 dl-Alpha-PSSCH-PSCCH-r16 ENUMERATED {alpha0, alpha04, alpha05, alpha06, alpha07, alpha08, alpha09, alpha1} OPTIONAL, -- Need S

 sl-P0-PSSCH-PSCCH-r16 INTEGER (-16..15) OPTIONAL, -- Need S

 dl-P0-PSSCH-PSCCH-r16 INTEGER (-16..15) OPTIONAL, -- Need M

 dl-Alpha-PSFCH-r16 ENUMERATED {alpha0, alpha04, alpha05, alpha06, alpha07, alpha08, alpha09, alpha1} OPTIONAL, -- Need S

 dl-P0-PSFCH-r16 INTEGER (-16..15) OPTIONAL, -- Need M

 ...

}

-- TAG-SL-RESOURCEPOOL-STOP

-- ASN1STOP

| ***SL-ZoneConfigMCR* field descriptions** |
| --- |
| ***sl-TransRange***Indicates the communication range requirement for the corresponding *sl-ZoneConfigMCR-Index*. |
| ***sl-ZoneConfig***Indicates the zone configuration for the corresponding *sl-ZoneConfigMCR-Index*. |
| ***sl-ZoneConfigMCR-Index***Indicates the codepoint of the communication range requirement field in SCI. |

|  |
| --- |
| ***SL-ResourcePool* field descriptions** |
| ***dummy***This field is not used in the specification. If received it shall be ignored by the UE. |
| ***sl-FilterCoefficient***This field indicates the filtering coefficient for long-term measurement and reference signal power derivation used for sideilnk open-loop power control. |
| ***sl-Additional-MCS-Table***Indicates the MCS table(s) additionally used in the resource pool. 64QAM table is (pre-)configured as default. Zero, one or two can be additionally (pre-)configured using the 256QAM and/or low-SE MCS tables. If two MCS tables are indicated, 256QAM MCS table is the 1st table and qam64lowSE MCS table is the 2nd table as specified in TS 38.214 [19], clause 8.1.3.1. |
| ***sl-NumSubchannel***Indicates the number of subchannels in the corresponding resource pool, which consists of contiguous PRBs only. |
| ***sl-PreemptionEnable***Indicates whether pre-emption is disabled or enabled in a resource pool. If the field is present and the value is *pl1*, *pl2*, and so on (but not *enabled*), it means that pre-emption is enabled and a priority level p\_preemption is configured. If the field is present and the value is *enabled*, the pre-emption is enabled (but p\_preemption is not configured) and pre-emption is applicable to all levels. |
| ***sl-PriorityThreshold-UL-URLLC***Indicates the threshold used to determine whether NR sidelink transmission is prioritized over uplink transmission of priority index 1 as specified in TS 38.213[13], clause 16.2.4.3, or whether PUCCH transmission carrying SL HARQ is prioritized over PUCCH transmission carrying UCI of priority index 1 if they overlap in time as specified in TS 38.213 [13], clause 9.2.5.0. |
| ***sl-PriorityThreshold***Indicates the threshold used to determine whether NR sidelink transmission is prioritized over uplink transmission of priority index 0 as specified in TS 38.213[13], clause 16.2.4.3, or whether PUCCH transmission carrying SL HARQ is prioritized over PUCCH transmission carrying UCI of priority index 0 if they overlap in time as specified in TS 38.213 [13], clause 9.2.5.0. |
| ***sl-RB-Number***Indicates the number of PRBs in the corresponding resource pool, which consists of contiguous PRBs only. The remaining RB cannot be used (See TS 38.214[19], clause 8). |
| ***sl-StartRB-Subchannel***Indicates the lowest RB index of the subchannel with the lowest index in the resource pool with respect to the lowest RB index of a SL BWP. |
| ***sl-SubchannelSize***Indicates the minimum granularity in frequency domain for the sensing for PSSCH resource selection in the unit of PRB. |
| ***sl-SyncAllowed***Indicates the allowed synchronization reference(s) which is (are) allowed to use the configured resource pool. |
| ***sl-SyncConfigIndex***Indicates the synchronisation configuration that is associated with a reception pool, by means of an index to the corresponding entry *SL-SyncConfigList* of in *SIB12* for NR sidelink communication. |
| ***sl-TDD-Configuration***Indicates the TDD configuration associated with the reception pool of the cell indicated by *sl-SyncConfigIndex*. |
| ***sl-ThreshS-RSSI-CBR***Indicates the S-RSSI threshold for determining the contribution of a sub-channel to the CBR measurement. Value 0 corresponds to -112 dBm, value 1 to -110 dBm, value n to (-112 + n\*2) dBm, and so on. |
| ***sl-TimeResource***Indicates the bitmap of the resource pool, which is defined by repeating the bitmap with a periodicity during a SFN or DFN cycle. |
| ***sl-TimeWindowSizeCBR***Indicates the time window size for CBR measurement. |
| ***sl-TimeWindowSizeCR***Indicates the time window size for CR evaluation. |
| ***sl-TxPercentageList***Indicates the portion of candidate single-slot PSSCH resources over the toal resources. Value p20 corresponds to 20%, and so on. |
| ***sl-X-Overhead***Accounts for overhead from CSI-RS, PT-RS. If the field is absent, the UE applies value *n0* (see TS 38.214 [19], clause 5.1.3.2). |

| ***SL-SyncAllowed* field descriptions** |
| --- |
| ***gnbEnb-Sync***If configured, the (pre-) configured resources can be used if the UE is directly or indirectly synchronized to eNB or gNB (i.e., synchronized to a reference UE which is directly synchronized to eNB or gNB). |
| ***gnss-Sync***If configured, the (pre-) configured resources can be used if the UE is directly or indirectly synchronized to GNSS (i.e., synchronized to a reference UE which is directly synchronized to GNSS). |
| ***ue-Sync***If configured, the (pre-) configured resources can be used if the UE is synchronized to a reference UE which is not synchronized to eNB, gNB and GNSS directly or indirectly. |

| ***SL-PSCCH-Config* field descriptions** |
| --- |
| ***sl-FreqResourcePSCCH***Indicates the number of PRBs for PSCCH in a resource pool where it is not greater than the number PRBs of the subchannel. |
| ***sl-DMRS-ScrambleID***Indicates the initialization value for PSCCH DMRS scrambling. |
| ***sl-NumReservedBits***Indicates the number of reserved bits in first stage SCI. |
| ***sl-TimeResourcePSCCH***Indicates the number of symbols of PSCCH in a resource pool. |

| ***SL-PSSCH-Config* field descriptions** |
| --- |
| ***sl-BetaOffsets2ndSCI***Indicates candidates of beta-offset values to determine the number of coded modulation symbols for second stage SCI. The value indicates the index of Table 9.3-2 of TS 38.213 [13]. |
| ***sl-PSSCH-DMRS-TimePatternList***Indicates the set of PSSCH DMRS time domain patterns in terms of PSSCH DMRS symbols in a slot that can be used in the resource pool. |
| ***sl-Scaling***Indicates a scaling factor to limit the number of resource elements assigned to the second stage SCI on PSSCH. Value *f0p5* corresponds to 0.5, value *f0p65* corresponds to 0.65, and so on. |

| ***SL-PSFCH-Config* field descriptions** |
| --- |
| ***sl-MinTimeGapPSFCH***The minimum time gap between PSFCH and the associated PSSCH in the unit of slots. |
| ***sl-NumMuxCS-Pair***Indicates the number of cyclic shift pairs used for a PSFCH transmission that can be multiplexed in a PRB. |
| ***sl-PSFCH-CandidateResourceType***Indicates the number of PSFCH resources available for multiplexing HARQ-ACK information in a PSFCH transmission (see TS 38.213 [13], clause 16.3). |
| ***sl-PSFCH-HopID***Scrambling ID for sequence hopping of the PSFCH used in the resource pool. |
| ***sl-PSFCH-Period***Indicates the period of PSFCH resource in the unit of slots within this resource pool. If set to *sl0*, no resource for PSFCH, and HARQ feedback for all transmissions in the resource pool is disabled. |
| ***sl-PSFCH-RB-Set***Indicates the set of PRBs that are actually used for PSFCH transmission and reception. The leftmost bit of the bitmap refers to the lowest RB index in the resource pool, and so on. Value 0 in the bitmap indicates that the corresponding PRB is not used for PSFCH transmission and reception while value 1 indicates that the corresponding PRB is used for PSFCH transmission and reception (see TS 38.213 [13]). |

| ***SL-PTRS-Config* field descriptions** |
| --- |
| ***sl-PTRS-FreqDensity***Presence and frequency density of SL PT-RS as a function of scheduled BW. If the field is not configured, the UE uses K\_PT-RS = 2 |
| ***sl-PTRS-TimeDensity***Presence and time density of SL PT-RS as a function of MCS. If the field is not configured, the UE uses L\_PT-RS = 1 |
| ***sl-PTRS-RE-Offset***Indicates the subcarrier offset for SL PT-RS . If the field is not configured, the UE applies the value offset00 |

| ***SL-UE-SelectedConfigRP* field descriptions** |
| --- |
| ***sl-CBR-PriorityTxConfigList***Indicates the mapping between PSSCH transmission parameter (such as MCS, PRB number, retransmission number, CR limit) sets by using the indexes of the configurations in *sl-CBR-PSSCH-TxConfigList*, CBR ranges by using the indexes to the entry of the CBR range configurations in *sl-CBR-RangeConfigList*, and priority ranges. It also indicates the default PSSCH transmission parameters to be used when CBR measurement results are not available, and MCS range for the MCS tables used in the resource pool. The field *sl-CBR-PriorityTxConfigList-v1650* is present only when *sl-CBR-PriorityTxConfigList-r16* is configured. |
| ***sl-MaxNumPerReserve***Indicates the maximum number of reserved PSCCH/PSSCH resources that can be indicated by an SCI. |
| ***sl-MultiReserveResource***Indicates if it is allowed to reserve a sidelink resource for an initial transmission of a TB by an SCI associated with a different TB, based on sensing and resource selection procedure. |
| ***sl-ResourceReservePeriodList***Set of possible resource reservation period allowed in the resource pool in the unit of ms. Up to 16 values can be configured per resource pool. The value ms0 is always configured. |
| ***sl-RS-ForSensing***Indicates whether DMRS of PSCCH or PSSCH is used for L1 RSRP measurement in the sensing operation. |
| ***sl-SensingWindow***Parameter that indicates the start of the sensing window. |
| ***sl-SelectionWindowList***Parameter that determines the end of the selection window in the resource selection for a TB with respect to priority indicated in SCI. Value n1 corresponds to 1\*2µ, value n5 corresponds to 5\*2µ, and so on, where µ = 0,1,2,3 refers to SCS 15,30,60,120 kHz respectively. |
| ***sl-Thres-RSRP-List***Indicates a list of 64 thresholds, and the threshold should be selected based on the priority in the decoded SCI and the priority in the SCI to be transmitted. A resource is excluded if it is indicated or reserved by a decoded SCI and PSSCH/PSCCH RSRP in the associated data resource is above a threshold. |

| ***SL-PowerControl* field descriptions** |
| --- |
| ***sl-MaxTransPower***Indicates the maximum value of the UE's sidelink transmission power on this resource pool. The unit is dBm. |
| ***sl-Alpha-PSSCH-PSCCH***Indicates alpha value for sidelink pathloss based power control for PSCCH/PSSCH when sl-P0-PSSCH is configured. When the field is absent the UE applies the value 1.  |
| ***sl-P0-PSSCH-PSCCH***Indicates P0 value for sidelink pathloss based power control for PSCCH/PSSCH. If not configured, sidelink pathloss based power control is disabled for PSCCH/PSSCH. |
| ***dl-Alpha-PSSCH-PSCCH***Indicates alpha value for downlink pathloss based power control for PSCCH/PSSCH when dl-P0-PSSCH is configured. When the field is absent the UE applies the value 1.  |
| ***dl-P0-PSSCH-PSCCH***Indicates P0 value for downlink pathloss based power control for PSCCH/PSSCH. If not configured, downlink pathloss based power control is disabled for PSCCH/PSSCH. |
| ***dl-Alpha-PSFCH***Indicates alpha value for downlink pathloss based power control for PSFCH when dl-P0-PSFCH is configured. When the field is absent the UE applies the value 1.  |
| ***dl-P0-PSFCH***Indicates P0 value for downlink pathloss based power control for PSFCH. If not configured, downlink pathloss based power control is disabled for PSFCH. |

| ***SL-MinMaxMCS-Config* field descriptions** |
| --- |
| ***sl-MaxMCS-PSSCH***Indicates the maximum MCS value when using the associated MCS table. If no MCS is configured, UE autonomously selects MCS from the full range of values. |
| ***sl-MinMCS-PSSCH***Indicates the minimum MCS value when using the associated MCS table. If no MCS is configured, UE autonomously selects MCS from the full range of values. |

|  |
| --- |
| NEXT CHANGE |

####  *SL-RLC-Config*

The IE *SL-RLC-Config* is used to specify the RLC configuration of sidelink DRB. RLC AM configuration is only applicable to the unicast NR sidelink communication.

*SL-RLC-Config* information element

-- ASN1START

-- TAG-SL-RLC-CONFIG-START

SL-RLC-Config-r16 ::= CHOICE {

 sl-AM-RLC-r16 SEQUENCE {

 sl-SN-FieldLengthAM-r16 SN-FieldLengthAM OPTIONAL, -- Cond SLRBSetup

 sl-T-PollRetransmit-r16 T-PollRetransmit,

 sl-PollPDU-r16 PollPDU,

 sl-PollByte-r16 PollByte,

 sl-MaxRetxThreshold-r16 ENUMERATED { t1, t2, t3, t4, t6, t8, t16, t32 },

 ...

 },

 sl-UM-RLC-r16 SEQUENCE {

 sl-SN-FieldLengthUM-r16 SN-FieldLengthUM OPTIONAL, -- Cond SLRBSetup

 ...

 },

 ...

}

-- TAG-SL-RLC-CONFIG-STOP

-- ASN1STOP

| *SL-RLC-Config* field descriptions |
| --- |
| ***sl-MaxRetxThreshold***Parameter value of *maxRetxThreshold* for RLC AM for NR sidelink communications, see TS 38.322 [4]. Value *t1* corresponds to 1 retransmission, value *t2* corresponds to 2 retransmissions and so on. |
| ***sl-PollByte***Parameter value of *pollByte* for RLC AM for NR sidelink communications, see TS 38.322 [4]. Value *kB25* corresponds to 25 kBytes, value *kB50* corresponds to 50 kBytes and so on. *infinity* corresponds to an infinite amount of kBytes. |
| ***sl-PollPDU***Parameter value of *pollPDU* for RLC AM for NR sidelink communications, seeTS 38.322 [4]. Value *p4* corresponds to 4 PDUs, value *p8* corresponds to 8 PDUs and so on. *infinity* corresponds to an infinite number of PDUs. |
| ***sl-SN-FieldLength***This field indicates the RLC SN field size for NR sidelink communication, see TS 38.322 [4]. For groupcast and broadcast, only value *size6* (6 bits) is configured for the field *sl-SN-FieldLengthUM*. |
| ***sl-T-PollRetransmit***Timer value of *t-PollRetransmit* for RLC AM for NR sidelink communications, see TS 38.322 [4], in milliseconds. Value *ms5* means 5 ms, value *ms10* means 10 ms and so on. |

|  |  |
| --- | --- |
| Conditional Presence | Explanation |
| *SLRBSetup* | The field is mandatory present in case of sidelink DRB setup via the dedicated signalling and in case of sidelink DRB configuration via system information and pre-configuration; otherwise the field is optionally present, need M. |

|  |
| --- |
| NEXT CHANGE |

– *SL-SyncConfig*

The IE *SL-SyncConfig* specifies the configuration information concerning reception of synchronisation signals from neighbouring cells as well as concerning the transmission of synchronisation signals for sidelink communication.

***SL-SyncConfig* information element**

-- ASN1START

-- TAG-SL-SYNCCONFIG-START

SL-SyncConfigList-r16 ::= SEQUENCE (SIZE (1..maxSL-SyncConfig-r16)) OF SL-SyncConfig-r16

SL-SyncConfig-r16 ::= SEQUENCE {

 sl-SyncRefMinHyst-r16 ENUMERATED {dB0, dB3, dB6, dB9, dB12} OPTIONAL, -- Need R

 sl-SyncRefDiffHyst-r16 ENUMERATED {dB0, dB3, dB6, dB9, dB12, dBinf} OPTIONAL, -- Need R

 sl-filterCoefficient-r16 FilterCoefficient OPTIONAL, -- Need R

 sl-SSB-TimeAllocation1-r16 SL-SSB-TimeAllocation-r16 OPTIONAL, -- Need R

 sl-SSB-TimeAllocation2-r16 SL-SSB-TimeAllocation-r16 OPTIONAL, -- Need R

 sl-SSB-TimeAllocation3-r16 SL-SSB-TimeAllocation-r16 OPTIONAL, -- Need R

 sl-SSID-r16 INTEGER (0..671) OPTIONAL, -- Need R

 txParameters-r16 SEQUENCE {

 syncTxThreshIC-r16 SL-RSRP-Range-r16 OPTIONAL, -- Need R

 syncTxThreshOoC-r16 SL-RSRP-Range-r16 OPTIONAL, -- Need R

 syncInfoReserved-r16 BIT STRING (SIZE (2)) OPTIONAL -- Need R

 },

 gnss-Sync-r16 ENUMERATED {true} OPTIONAL, -- Need R

 ...

}

SL-RSRP-Range-r16 ::= INTEGER (0..13)

SL-SSB-TimeAllocation-r16 ::= SEQUENCE {

 sl-NumSSB-WithinPeriod-r16 ENUMERATED {n1, n2, n4, n8, n16, n32, n64} OPTIONAL, -- Need R

 sl-TimeOffsetSSB-r16 INTEGER (0..1279) OPTIONAL, -- Need R

 sl-TimeInterval-r16 INTEGER (0..639) OPTIONAL -- Need R

}

-- TAG-SL-SYNCCONFIG-STOP

-- ASN1STOP

|  |
| --- |
| ***SL-SyncConfig* field descriptions** |
| ***gnss-Sync***If configured, the synchronization configuration is used for SLSS transmission/reception when the UE is synchronized to GNSS. If not configured, the synchronization configuration is used for SLSS transmission/reception when the UE is synchronized to eNB/gNB. |
| ***sl-SyncRefMinHyst***Hysteresis when evaluating a SyncRef UE using absolute comparison. |
| ***sl-SyncRefDiffHyst***Hysteresis when evaluating a SyncRef UE using relative comparison. |
| ***sl-NumSSB-WithinPeriod***Indicates the number of sidelink SSB transmissions within one sidelink SSB period. The applicable values are related to the subcarrier spacing and frequency as follows:FR1, SCS = 15 kHz: 1FR1, SCS = 30 kHz: 1, 2FR1, SCS = 60 kHz: 1, 2, 4FR2, SCS = 60 kHz: 1, 2, 4, 8, 16, 32FR2, SCS = 120 kHz: 1, 2, 4, 8, 16, 32, 64 |
| ***sl-TimeOffsetSSB***Indicates the slot offset from the start of sidelink SSB period to the first sidelink SSB. |
| ***sl-TimeInterval***Indicates the slot interval between neighboring sidelink SSBs. This value is applicable when there are more than one sidelink SSBs within one sidelink SSB period. |
| ***sl-SSID***Indicates the ID of sidelink synchronization signal assoicated with different synchronization priorities. |
| ***SL-RSRP-Range***Value 0 corresponds to -infinity, value 1 to -115dBm, value 2 to -110dBm, and so on (i.e. in steps of 5dBm) until value 12, which corresponds to -60dBm, while value 13 corresponds to +infinity. |
| ***syncInfoReserved***Reserved for future use. |

|  |
| --- |
| NEXT CHANGE |

6.6 PC5 RRC messages

6.6.2 Message definitions

– *RRCReconfigurationSidelink*

The *RRCReconfigurationSidelink* message is the command to AS configuration of the PC5 RRC connection. It is only applied to unicast of NR sidelink communication.

Signalling radio bearer: SL-SRB3

RLC-SAP: AM

Logical channel: SCCH

Direction: UE to UE

***RRCReconfigurationSidelink* message**

-- ASN1START

-- TAG-RRCRECONFIGURATIONSIDELINK-START

RRCReconfigurationSidelink ::= SEQUENCE {

 rrc-TransactionIdentifier-r16 RRC-TransactionIdentifier,

 criticalExtensions CHOICE {

 rrcReconfigurationSidelink-r16 RRCReconfigurationSidelink-IEs-r16,

 criticalExtensionsFuture SEQUENCE {}

 }

}

RRCReconfigurationSidelink-IEs-r16 ::= SEQUENCE {

 slrb-ConfigToAddModList-r16 SEQUENCE (SIZE (1..maxNrofSLRB-r16)) OF SLRB-Config-r16 OPTIONAL, -- Need N

 slrb-ConfigToReleaseList-r16 SEQUENCE (SIZE (1..maxNrofSLRB-r16)) OF SLRB-PC5-ConfigIndex-r16 OPTIONAL, -- Need N

 sl-MeasConfig-r16 SetupRelease {SL-MeasConfig-r16} OPTIONAL, -- Need M

 sl-CSI-RS-Config-r16 SetupRelease {SL-CSI-RS-Config-r16} OPTIONAL, -- Need M

 sl-ResetConfig-r16 ENUMERATED {true} OPTIONAL, -- Need N

 sl-LatencyBoundCSI-Report-r16 INTEGER (3..160) OPTIONAL, -- Need M

 lateNonCriticalExtension OCTET STRING OPTIONAL,

 nonCriticalExtension SEQUENCE {} OPTIONAL

}

SLRB-Config-r16::= SEQUENCE {

 slrb-PC5-ConfigIndex-r16 SLRB-PC5-ConfigIndex-r16,

 sl-SDAP-ConfigPC5-r16 SL-SDAP-ConfigPC5-r16 OPTIONAL, -- Need M

 sl-PDCP-ConfigPC5-r16 SL-PDCP-ConfigPC5-r16 OPTIONAL, -- Need M

 sl-RLC-ConfigPC5-r16 SL-RLC-ConfigPC5-r16 OPTIONAL, -- Need M

 sl-MAC-LogicalChannelConfigPC5-r16 SL-LogicalChannelConfigPC5-r16 OPTIONAL, -- Need M

 ...

}

SLRB-PC5-ConfigIndex-r16 ::= INTEGER (1..maxNrofSLRB-r16)

SL-SDAP-ConfigPC5-r16 ::= SEQUENCE {

 sl-MappedQoS-FlowsToAddList-r16 SEQUENCE (SIZE (1.. maxNrofSL-QFIsPerDest-r16)) OF SL-PQFI-r16 OPTIONAL, -- Need N

 sl-MappedQoS-FlowsToReleaseList-r16 SEQUENCE (SIZE (1.. maxNrofSL-QFIsPerDest-r16)) OF SL-PQFI-r16 OPTIONAL, -- Need N

 sl-SDAP-Header-r16 ENUMERATED {present, absent},

 ...

}

SL-PDCP-ConfigPC5-r16 ::= SEQUENCE {

 sl-PDCP-SN-Size-r16 ENUMERATED {len12bits, len18bits} OPTIONAL, -- Need M

 sl-OutOfOrderDelivery-r16 ENUMERATED { true } OPTIONAL, -- Need R

 ...

}

SL-RLC-ConfigPC5-r16 ::= CHOICE {

 sl-AM-RLC-r16 SEQUENCE {

 sl-SN-FieldLengthAM-r16 SN-FieldLengthAM OPTIONAL, -- Need M

 ...

 },

 sl-UM-Bi-Directional-RLC-r16 SEQUENCE {

 sl-SN-FieldLengthUM-r16 SN-FieldLengthUM OPTIONAL, -- Need M

 ...

 },

 sl-UM-Uni-Directional-RLC-r16 SEQUENCE {

 sl-SN-FieldLengthUM-r16 SN-FieldLengthUM OPTIONAL, -- Need M

 ...

 }

}

SL-LogicalChannelConfigPC5-r16 ::= SEQUENCE {

 sl-LogicalChannelIdentity-r16 LogicalChannelIdentity,

 ...

}

SL-PQFI-r16 ::= INTEGER (1..64)

SL-CSI-RS-Config-r16 ::= SEQUENCE {

 sl-CSI-RS-FreqAllocation-r16 CHOICE {

 sl-OneAntennaPort-r16 BIT STRING (SIZE (12)),

 sl-TwoAntennaPort-r16 BIT STRING (SIZE (6))

 } OPTIONAL, -- Need M

 sl-CSI-RS-FirstSymbol-r16 INTEGER (3..12) OPTIONAL, -- Need M

 ...

}

-- TAG-RRCRECONFIGURATIONSIDELINK-STOP

-- ASN1STOP

|  |
| --- |
| ***RRCReconfigurationSidelink* field descriptions** |
| ***sl-CSI-RS-FreqAllocation***Indicates the frequency domain position for sidelink CSI-RS. |
| ***sl-CSI-RS-FirstSymbol***Indicates the position of first symbol of sidelink CSI-RS. |
| ***sl-Resetconfig***Indicates that the full configuration should be applicable for the *RRCReconfigurationSidelink* message. |
| ***sl-LatencyBoundCSI-Report***Indicate the latency bound of SL CSI report from the associated SL CSI triggering in terms of number of slots. |
| ***sl-LogicalChannelIdentity***Indicates the identity of the sidelink logical channel. |
| ***sl-MappedQoS-FlowsToAddList***Indicate the QoS flows to be mapped to the configured sidelink DRB. Each entry is indicated by the *SL-PQFI*, which is used between UEs, as defined in TS 23.287 [55]. |
| ***sl-MappedQoS-FlowsToReleaseList***Indicate the QoS flows to be released from the configured sidelink DRB. Each entry is indicated by the *SL-PQFI*, which is used between UEs, as defined in TS 23.287 [55]. |
| ***sl-MeasConfig***Indicates the sidelink measurement configuration for the unicast destination. |
| ***sl-OutOfOrderDelivery***Indicates whether or not outOfOrderDelivery specified in TS 38.323 [5] is configured. This field should be either always present or always absent, after the sidelink radio bearer is established. |
| ***sl-PDCP-SN-Size***Indicates the PDCP SN size of the configured sidelink DRB. |
| ***sl-SDAP-Header***Indicates whether or not a SDAP header is present on this sidelink DRB. |

|  |
| --- |
| NEXT CHANGE |

6.4 RRC multiplicity and type constraint values

– Multiplicity and type constraint definitions

-- ASN1START

-- TAG-MULTIPLICITY-AND-TYPE-CONSTRAINT-DEFINITIONS-START

maxAI-DCI-PayloadSize-r16 INTEGER ::= 128 --Maximum size of the DCI payload scrambled with ai-RNTI

maxAI-DCI-PayloadSize-1-r16 INTEGER ::= 127 --Maximum size of the DCI payload scrambled with ai-RNTI minus 1

maxBandComb INTEGER ::= 65536 -- Maximum number of DL band combinations

maxBandsUTRA-FDD-r16 INTEGER ::= 64 -- Maximum number of bands listed in UTRA-FDD UE caps

maxBH-RLC-ChannelID-r16 INTEGER ::= 65536 -- Maximum value of BH RLC Channel ID

maxBT-IdReport-r16 INTEGER ::= 32 -- Maximum number of Bluetooth IDs to report

maxBT-Name-r16 INTEGER ::= 4 -- Maximum number of Bluetooth name

maxCAG-Cell-r16 INTEGER ::= 16 -- Maximum number of NR CAG cell ranges in SIB3, SIB4

maxTwoPUCCH-Grp-ConfigList-r16 INTEGER ::= 32 -- Maximum number of supported configuration(s) of {primary PUCCH group

 -- config, secondary PUCCH group config}

maxCBR-Config-r16 INTEGER ::= 8 -- Maximum number of CBR range configurations for sidelink communication

 -- congestion control

maxCBR-Config-1-r16 INTEGER ::= 7 -- Maximum number of CBR range configurations for sidelink communication

 -- congestion control minus 1

maxCBR-Level-r16 INTEGER ::= 16 -- Maximum nuber of CBR levels

maxCBR-Level-1-r16 INTEGER ::= 15 -- Maximum number of CBR levels minus 1

maxCellBlack INTEGER ::= 16 -- Maximum number of NR blacklisted cell ranges in SIB3, SIB4

maxCellGroupings-r16 INTEGER ::= 32 -- Maximum number of cell groupings for NR-DC

maxCellHistory-r16 INTEGER ::= 16 -- Maximum number of visited cells reported

maxCellInter INTEGER ::= 16 -- Maximum number of inter-Freq cells listed in SIB4

maxCellIntra INTEGER ::= 16 -- Maximum number of intra-Freq cells listed in SIB3

maxCellMeasEUTRA INTEGER ::= 32 -- Maximum number of cells in E-UTRAN

maxCellMeasIdle-r16 INTEGER ::= 8 -- Maximum number of cells per carrier for idle/inactive measurements

maxCellMeasUTRA-FDD-r16 INTEGER ::= 32 -- Maximum number of cells in FDD UTRAN

maxCellWhite INTEGER ::= 16 -- Maximum number of NR whitelisted cell ranges in SIB3, SIB4

maxEARFCN INTEGER ::= 262143 -- Maximum value of E-UTRA carrier frequency

maxEUTRA-CellBlack INTEGER ::= 16 -- Maximum number of E-UTRA blacklisted physical cell identity ranges

 -- in SIB5

maxEUTRA-NS-Pmax INTEGER ::= 8 -- Maximum number of NS and P-Max values per band

maxLogMeasReport-r16 INTEGER ::= 520 -- Maximum number of entries for logged measurements

maxMultiBands INTEGER ::= 8 -- Maximum number of additional frequency bands that a cell belongs to

maxNARFCN INTEGER ::= 3279165 -- Maximum value of NR carrier frequency

maxNR-NS-Pmax INTEGER ::= 8 -- Maximum number of NS and P-Max values per band

maxFreqIdle-r16 INTEGER ::= 8 -- Maximum number of carrier frequencies for idle/inactive measurements

maxNrofServingCells INTEGER ::= 32 -- Max number of serving cells (SpCells + SCells)

maxNrofServingCells-1 INTEGER ::= 31 -- Max number of serving cells (SpCell + SCells) per cell group

maxNrofAggregatedCellsPerCellGroup INTEGER ::= 16

maxNrofAggregatedCellsPerCellGroupMinus4-r16 INTEGER ::= 12

maxNrofDUCells-r16 INTEGER ::= 512 -- Max number of cells configured on the collocated IAB-DU

maxNrofAvailabilityCombinationsPerSet-r16 INTEGER ::= 512 -- Max number of AvailabilityCombinationId used in the DCI format 2\_5

maxNrofAvailabilityCombinationsPerSet-1-r16 INTEGER ::= 511 -- Max number of AvailabilityCombinationId used in the DCI format 2\_5 minus 1

maxNrofSCells INTEGER ::= 31 -- Max number of secondary serving cells per cell group

maxNrofCellMeas INTEGER ::= 32 -- Maximum number of entries in each of the cell lists in a measurement object

maxNrofCG-SL-r16 INTEGER ::= 8 -- Max number of sidelink configured grant

maxNrofCG-SL-1-r16 INTEGER ::= 7 -- Max number of sidelink configured grant minus 1

maxNrofSS-BlocksToAverage INTEGER ::= 16 -- Max number for the (max) number of SS blocks to average to determine cell measurement

maxNrofCondCells-r16 INTEGER ::= 8 -- Max number of conditional candidate SpCells

maxNrofCSI-RS-ResourcesToAverage INTEGER ::= 16 -- Max number for the (max) number of CSI-RS to average to determine cell measurement

maxNrofDL-Allocations INTEGER ::= 16 -- Maximum number of PDSCH time domain resource allocations

maxNrofSR-ConfigPerCellGroup INTEGER ::= 8 -- Maximum number of SR configurations per cell group

maxLCG-ID INTEGER ::= 7 -- Maximum value of LCG ID

maxLC-ID INTEGER ::= 32 -- Maximum value of Logical Channel ID

maxLC-ID-Iab-r16 INTEGER ::= 65855 -- Maximum value of BH Logical Channel ID extension

maxLTE-CRS-Patterns-r16 INTEGER ::= 3 -- Maximum number of additional LTE CRS rate matching patterns

maxNrofTAGs INTEGER ::= 4 -- Maximum number of Timing Advance Groups

maxNrofTAGs-1 INTEGER ::= 3 -- Maximum number of Timing Advance Groups minus 1

maxNrofBWPs INTEGER ::= 4 -- Maximum number of BWPs per serving cell

maxNrofCombIDC INTEGER ::= 128 -- Maximum number of reported MR-DC combinations for IDC

maxNrofSymbols-1 INTEGER ::= 13 -- Maximum index identifying a symbol within a slot (14 symbols, indexed from 0..13)

maxNrofSlots INTEGER ::= 320 -- Maximum number of slots in a 10 ms period

maxNrofSlots-1 INTEGER ::= 319 -- Maximum number of slots in a 10 ms period minus 1

maxNrofPhysicalResourceBlocks INTEGER ::= 275 -- Maximum number of PRBs

maxNrofPhysicalResourceBlocks-1 INTEGER ::= 274 -- Maximum number of PRBs minus 1

maxNrofPhysicalResourceBlocksPlus1 INTEGER ::= 276 -- Maximum number of PRBs plus 1

maxNrofControlResourceSets INTEGER ::= 12 -- Max number of CoReSets configurable on a serving cell

maxNrofControlResourceSets-1 INTEGER ::= 11 -- Max number of CoReSets configurable on a serving cell minus 1

maxNrofControlResourceSets-1-r16 INTEGER ::= 15 -- Max number of CoReSets configurable on a serving cell extended in minus 1

maxNrofCoresetPools-r16 INTEGER ::= 2 -- Maximum number of CORESET pools

maxCoReSetDuration INTEGER ::= 3 -- Max number of OFDM symbols in a control resource set

maxNrofSearchSpaces-1 INTEGER ::= 39 -- Max number of Search Spaces minus 1

maxSFI-DCI-PayloadSize INTEGER ::= 128 -- Max number payload of a DCI scrambled with SFI-RNTI

maxSFI-DCI-PayloadSize-1 INTEGER ::= 127 -- Max number payload of a DCI scrambled with SFI-RNTI minus 1

maxIAB-IP-Address-r16 INTEGER ::= 32 -- Max number of assigned IP addresses

maxINT-DCI-PayloadSize INTEGER ::= 126 -- Max number payload of a DCI scrambled with INT-RNTI

maxINT-DCI-PayloadSize-1 INTEGER ::= 125 -- Max number payload of a DCI scrambled with INT-RNTI minus 1

maxNrofRateMatchPatterns INTEGER ::= 4 -- Max number of rate matching patterns that may be configured

maxNrofRateMatchPatterns-1 INTEGER ::= 3 -- Max number of rate matching patterns that may be configured minus 1

maxNrofRateMatchPatternsPerGroup INTEGER ::= 8 -- Max number of rate matching patterns that may be configured in one group

maxNrofCSI-ReportConfigurations INTEGER ::= 48 -- Maximum number of report configurations

maxNrofCSI-ReportConfigurations-1 INTEGER ::= 47 -- Maximum number of report configurations minus 1

maxNrofCSI-ResourceConfigurations INTEGER ::= 112 -- Maximum number of resource configurations

maxNrofCSI-ResourceConfigurations-1 INTEGER ::= 111 -- Maximum number of resource configurations minus 1

maxNrofAP-CSI-RS-ResourcesPerSet INTEGER ::= 16

maxNrOfCSI-AperiodicTriggers INTEGER ::= 128 -- Maximum number of triggers for aperiodic CSI reporting

maxNrofReportConfigPerAperiodicTrigger INTEGER ::= 16 -- Maximum number of report configurations per trigger state for aperiodic reporting

maxNrofNZP-CSI-RS-Resources INTEGER ::= 192 -- Maximum number of Non-Zero-Power (NZP) CSI-RS resources

maxNrofNZP-CSI-RS-Resources-1 INTEGER ::= 191 -- Maximum number of Non-Zero-Power (NZP) CSI-RS resources minus 1

maxNrofNZP-CSI-RS-ResourcesPerSet INTEGER ::= 64 -- Maximum number of NZP CSI-RS resources per resource set

maxNrofNZP-CSI-RS-ResourceSets INTEGER ::= 64 -- Maximum number of NZP CSI-RS resource sets per cell

maxNrofNZP-CSI-RS-ResourceSets-1 INTEGER ::= 63 -- Maximum number of NZP CSI-RS resource sets per cell minus 1

maxNrofNZP-CSI-RS-ResourceSetsPerConfig INTEGER ::= 16 -- Maximum number of resource sets per resource configuration

maxNrofNZP-CSI-RS-ResourcesPerConfig INTEGER ::= 128 -- Maximum number of resources per resource configuration

maxNrofZP-CSI-RS-Resources INTEGER ::= 32 -- Maximum number of Zero-Power (ZP) CSI-RS resources

maxNrofZP-CSI-RS-Resources-1 INTEGER ::= 31 -- Maximum number of Zero-Power (ZP) CSI-RS resources minus 1

maxNrofZP-CSI-RS-ResourceSets-1 INTEGER ::= 15

maxNrofZP-CSI-RS-ResourcesPerSet INTEGER ::= 16

maxNrofZP-CSI-RS-ResourceSets INTEGER ::= 16

maxNrofCSI-IM-Resources INTEGER ::= 32 -- Maximum number of CSI-IM resources

maxNrofCSI-IM-Resources-1 INTEGER ::= 31 -- Maximum number of CSI-IM resources minus 1

maxNrofCSI-IM-ResourcesPerSet INTEGER ::= 8 -- Maximum number of CSI-IM resources per set

maxNrofCSI-IM-ResourceSets INTEGER ::= 64 -- Maximum number of NZP CSI-IM resource sets per cell

maxNrofCSI-IM-ResourceSets-1 INTEGER ::= 63 -- Maximum number of NZP CSI-IM resource sets per cell minus 1

maxNrofCSI-IM-ResourceSetsPerConfig INTEGER ::= 16 -- Maximum number of CSI IM resource sets per resource configuration

maxNrofCSI-SSB-ResourcePerSet INTEGER ::= 64 -- Maximum number of SSB resources in a resource set

maxNrofCSI-SSB-ResourceSets INTEGER ::= 64 -- Maximum number of CSI SSB resource sets per cell

maxNrofCSI-SSB-ResourceSets-1 INTEGER ::= 63 -- Maximum number of CSI SSB resource sets per cell minus 1

maxNrofCSI-SSB-ResourceSetsPerConfig INTEGER ::= 1 -- Maximum number of CSI SSB resource sets per resource configuration

maxNrofFailureDetectionResources INTEGER ::= 10 -- Maximum number of failure detection resources

maxNrofFailureDetectionResources-1 INTEGER ::= 9 -- Maximum number of failure detection resources minus 1

maxNrofFreqSL-r16 INTEGER ::= 8 -- Maximum number of carrier frequncy for NR sidelink communication

maxNrofSL-BWPs-r16 INTEGER ::= 4 -- Maximum number of BWP for NR sidelink communication

maxFreqSL-EUTRA-r16 INTEGER ::= 8 -- Maximum number of EUTRA anchor carrier frequncy for NR sidelink communication

maxNrofSL-MeasId-r16 INTEGER ::= 64 -- Maximum number of sidelink measurement identity (RSRP) per destination

maxNrofSL-ObjectId-r16 INTEGER ::= 64 -- Maximum number of sidelink measurement objects (RSRP) per destination

maxNrofSL-ReportConfigId-r16 INTEGER ::= 64 -- Maximum number of sidelink measurement reporting configuration(RSRP) per destination

maxNrofSL-PoolToMeasureNR-r16 INTEGER ::= 8 -- Maximum number of resoure pool for NR sidelink measurement to measure for

 -- each measurement object (for CBR)

maxFreqSL-NR-r16 INTEGER ::= 8 -- Maximum number of NR anchor carrier frequncy for NR sidelink communication

maxNrofSL-QFIs-r16 INTEGER ::= 2048 -- Maximum number of QoS flow for NR sidelink communication per UE

maxNrofSL-QFIsPerDest-r16 INTEGER ::= 64 -- Maximum number of QoS flow per destination for NR sidelink communication

maxNrofObjectId INTEGER ::= 64 -- Maximum number of measurement objects

maxNrofPageRec INTEGER ::= 32 -- Maximum number of page records

maxNrofPCI-Ranges INTEGER ::= 8 -- Maximum number of PCI ranges

maxPLMN INTEGER ::= 12 -- Maximum number of PLMNs broadcast and reported by UE at establisghment

maxNrofCSI-RS-ResourcesRRM INTEGER ::= 96 -- Maximum number of CSI-RS resources per cell for an RRM measurement object

maxNrofCSI-RS-ResourcesRRM-1 INTEGER ::= 95 -- Maximum number of CSI-RS resources per cell for an RRM measurement object minus 1

maxNrofMeasId INTEGER ::= 64 -- Maximum number of configured measurements

maxNrofQuantityConfig INTEGER ::= 2 -- Maximum number of quantity configurations

maxNrofCSI-RS-CellsRRM INTEGER ::= 96 -- Maximum number of cells with CSI-RS resources for an RRM measurement object

maxNrofSL-Dest-r16 INTEGER ::= 32 -- Maximum number of destination for NR sidelink communication

maxNrofSL-Dest-1-r16 INTEGER ::= 31 -- Highest index of destination for NR sidelink communication

maxNrofSLRB-r16 INTEGER ::= 512 -- Maximum number of radio bearer for NR sidelink communication per UE

maxSL-LCID-r16 INTEGER ::= 512 -- Maximum number of RLC bearer for NR sidelink communication per UE

maxSL-SyncConfig-r16 INTEGER ::= 16 -- Maximum number of sidelink Sync configurations

maxNrofRXPool-r16 INTEGER ::= 16 -- Maximum number of Rx resource poolfor NR sidelink communication

maxNrofTXPool-r16 INTEGER ::= 8 -- Maximum number of Tx resourcepoolfor NR sidelink communication

maxNrofPoolID-r16 INTEGER ::= 16 -- Maximum index of resource pool for NR sidelink communication

maxNrofSRS-PathlossReferenceRS-r16 INTEGER ::= 64 -- Maximum number of RSs used as pathloss reference for SRS power control.

maxNrofSRS-PathlossReferenceRS-1-r16 INTEGER ::= 63 -- Maximum number of RSs used as pathloss reference for SRS power control-1.

maxNrofSRS-ResourceSets INTEGER ::= 16 -- Maximum number of SRS resource sets in a BWP.

maxNrofSRS-ResourceSets-1 INTEGER ::= 15 -- Maximum number of SRS resource sets in a BWP minus 1.

maxNrofSRS-PosResourceSets-r16 INTEGER ::= 16 -- Maximum number of SRS Positioning resource sets in a BWP.

maxNrofSRS-PosResourceSets-1-r16 INTEGER ::= 15 -- Maximum number of SRS Positioning resource sets in a BWP minus 1.

maxNrofSRS-Resources INTEGER ::= 64 -- Maximum number of SRS resources.

maxNrofSRS-Resources-1 INTEGER ::= 63 -- Maximum number of SRS resources minus 1.

maxNrofSRS-PosResources-r16 INTEGER ::= 64 -- Maximum number of SRS Positioning resources.

maxNrofSRS-PosResources-1-r16 INTEGER ::= 63 -- Maximum number of SRS Positioning resources in an SRS Positioning

 -- resource set minus 1.

maxNrofSRS-ResourcesPerSet INTEGER ::= 16 -- Maximum number of SRS resources in an SRS resource set

maxNrofSRS-TriggerStates-1 INTEGER ::= 3 -- Maximum number of SRS trigger states minus 1, i.e., the largest code point.

maxNrofSRS-TriggerStates-2 INTEGER ::= 2 -- Maximum number of SRS trigger states minus 2.

maxRAT-CapabilityContainers INTEGER ::= 8 -- Maximum number of interworking RAT containers (incl NR and MRDC)

maxSimultaneousBands INTEGER ::= 32 -- Maximum number of simultaneously aggregated bands

maxULTxSwitchingBandPairs INTEGER ::= 32 -- Maximum number of band pairs supporting dynamic UL Tx switching in a band combination

maxNrofSlotFormatCombinationsPerSet INTEGER ::= 512 -- Maximum number of Slot Format Combinations in a SF-Set.

maxNrofSlotFormatCombinationsPerSet-1 INTEGER ::= 511 -- Maximum number of Slot Format Combinations in a SF-Set minus 1.

maxNrofTrafficPattern-r16 INTEGER ::= 8 -- Maximum number of Traffic Pattern for NR sidelink communication.

maxNrofPUCCH-Resources INTEGER ::= 128

maxNrofPUCCH-Resources-1 INTEGER ::= 127

maxNrofPUCCH-ResourceSets INTEGER ::= 4 -- Maximum number of PUCCH Resource Sets

maxNrofPUCCH-ResourceSets-1 INTEGER ::= 3 -- Maximum number of PUCCH Resource Sets minus 1.

maxNrofPUCCH-ResourcesPerSet INTEGER ::= 32 -- Maximum number of PUCCH Resources per PUCCH-ResourceSet

maxNrofPUCCH-P0-PerSet INTEGER ::= 8 -- Maximum number of P0-pucch present in a p0-pucch set

maxNrofPUCCH-PathlossReferenceRSs INTEGER ::= 4 -- Maximum number of RSs used as pathloss reference for PUCCH power control.

maxNrofPUCCH-PathlossReferenceRSs-1 INTEGER ::= 3 -- Maximum number of RSs used as pathloss reference for PUCCH power control minus 1.

maxNrofPUCCH-PathlossReferenceRSs-r16 INTEGER ::= 64 -- Maximum number of RSs used as pathloss reference for PUCCH power control extended.

maxNrofPUCCH-PathlossReferenceRSs-1-r16 INTEGER ::= 63 -- Maximum number of RSs used as pathloss reference for PUCCH power control

 -- minus 1 extended.

maxNrofPUCCH-PathlossReferenceRSsDiff-r16 INTEGER ::= 60 -- Difference between the extended maximum and the non-extended maximum

maxNrofPUCCH-ResourceGroups-r16 INTEGER ::= 4 -- Maximum number of PUCCH resources groups.

maxNrofPUCCH-ResourcesPerGroup-r16 INTEGER ::= 128 -- Maximum number of PUCCH resources in a PUCCH group.

maxNrofMultiplePUSCHs-r16 INTEGER ::= 8 -- Maximum number of multiple PUSCHs in PUSCH TDRA list

maxNrofP0-PUSCH-AlphaSets INTEGER ::= 30 -- Maximum number of P0-pusch-alpha-sets (see 38,213, clause 7.1)

maxNrofP0-PUSCH-AlphaSets-1 INTEGER ::= 29 -- Maximum number of P0-pusch-alpha-sets minus 1 (see 38,213, clause 7.1)

maxNrofPUSCH-PathlossReferenceRSs INTEGER ::= 4 -- Maximum number of RSs used as pathloss reference for PUSCH power control.

maxNrofPUSCH-PathlossReferenceRSs-1 INTEGER ::= 3 -- Maximum number of RSs used as pathloss reference for PUSCH power control minus 1.

maxNrofPUSCH-PathlossReferenceRSs-r16 INTEGER ::= 64 -- Maximum number of RSs used as pathloss reference for PUSCH power control extended

maxNrofPUSCH-PathlossReferenceRSs-1-r16 INTEGER ::= 63 -- Maximum number of RSs used as pathloss reference for PUSCH power control minus 1

maxNrofPUSCH-PathlossReferenceRSsDiff-r16 INTEGER ::= 60 -- Difference between maxNrofPUSCH-PathlossReferenceRSs-r16 and

 -- maxNrofPUSCH-PathlossReferenceRSs

maxNrofNAICS-Entries INTEGER ::= 8 -- Maximum number of supported NAICS capability set

maxBands INTEGER ::= 1024 -- Maximum number of supported bands in UE capability.

maxBandsMRDC INTEGER ::= 1280

maxBandsEUTRA INTEGER ::= 256

maxCellReport INTEGER ::= 8

maxDRB INTEGER ::= 29 -- Maximum number of DRBs (that can be added in DRB-ToAddModLIst).

maxFreq INTEGER ::= 8 -- Max number of frequencies.

maxFreqLayers INTEGER ::= 4 -- Max number of frequency layers.

maxFreqIDC-r16 INTEGER ::= 128 -- Max number of frequencies for IDC indication.

maxCombIDC-r16 INTEGER ::= 128 -- Max number of reported UL CA for IDC indication.

maxFreqIDC-MRDC INTEGER ::= 32 -- Maximum number of candidate NR frequencies for MR-DC IDC indication

maxNrofCandidateBeams INTEGER ::= 16 -- Max number of PRACH-ResourceDedicatedBFR that in BFR config.

maxNrofCandidateBeams-r16 INTEGER ::= 64 -- Max number of candidate beam resources in BFR config.

maxNrofCandidateBeamsExt-r16 INTEGER ::= 48 -- Max number of PRACH-ResourceDedicatedBFR in the CandidateBeamRSListExt

maxNrofPCIsPerSMTC INTEGER ::= 64 -- Maximun number of PCIs per SMTC.

maxNrofQFIs INTEGER ::= 64

maxNrofResourceAvailabilityPerCombination-r16 INTEGER ::= 256

maxNrOfSemiPersistentPUSCH-Triggers INTEGER ::= 64 -- Maximum number of triggers for semi persistent reporting on PUSCH

maxNrofSR-Resources INTEGER ::= 8 -- Maximum number of SR resources per BWP in a cell.

maxNrofSlotFormatsPerCombination INTEGER ::= 256

maxNrofSpatialRelationInfos INTEGER ::= 8

maxNrofSpatialRelationInfos-plus-1 INTEGER ::= 9

maxNrofSpatialRelationInfos-r16 INTEGER ::= 64

maxNrofSpatialRelationInfosDiff-r16 INTEGER ::= 56 -- Difference between maxNrofSpatialRelationInfos-r16 and maxNrofSpatialRelationInfos

maxNrofIndexesToReport INTEGER ::= 32

maxNrofIndexesToReport2 INTEGER ::= 64

maxNrofSSBs-r16 INTEGER ::= 64 -- Maximum number of SSB resources in a resource set.

maxNrofSSBs-1 INTEGER ::= 63 -- Maximum number of SSB resources in a resource set minus 1.

maxNrofS-NSSAI INTEGER ::= 8 -- Maximum number of S-NSSAI.

maxNrofTCI-StatesPDCCH INTEGER ::= 64

maxNrofTCI-States INTEGER ::= 128 -- Maximum number of TCI states.

maxNrofTCI-States-1 INTEGER ::= 127 -- Maximum number of TCI states minus 1.

maxNrofUL-Allocations INTEGER ::= 16 -- Maximum number of PUSCH time domain resource allocations.

maxQFI INTEGER ::= 63

maxRA-CSIRS-Resources INTEGER ::= 96

maxRA-OccasionsPerCSIRS INTEGER ::= 64 -- Maximum number of RA occasions for one CSI-RS

maxRA-Occasions-1 INTEGER ::= 511 -- Maximum number of RA occasions in the system

maxRA-SSB-Resources INTEGER ::= 64

maxSCSs INTEGER ::= 5

maxSecondaryCellGroups INTEGER ::= 3

maxNrofServingCellsEUTRA INTEGER ::= 32

maxMBSFN-Allocations INTEGER ::= 8

maxNrofMultiBands INTEGER ::= 8

maxCellSFTD INTEGER ::= 3 -- Maximum number of cells for SFTD reporting

maxReportConfigId INTEGER ::= 64

maxNrofCodebooks INTEGER ::= 16 -- Maximum number of codebooks suppoted by the UE

maxNrofCSI-RS-ResourcesExt-r16 INTEGER ::= 16 -- Maximum number of codebook resources supported by the UE for eType2/Codebook combo

maxNrofCSI-RS-Resources INTEGER ::= 7 -- Maximum number of codebook resources supported by the UE

maxNrofCSI-RS-ResourcesAlt-r16 INTEGER ::= 512 -- Maximum number of alternative codebook resources supported by the UE

maxNrofCSI-RS-ResourcesAlt-1-r16 INTEGER ::= 511 -- Maximum number of alternative codebook resources supported by the UE minus 1

maxNrofSRI-PUSCH-Mappings INTEGER ::= 16

maxNrofSRI-PUSCH-Mappings-1 INTEGER ::= 15

maxSIB INTEGER::= 32 -- Maximum number of SIBs

maxSI-Message INTEGER::= 32 -- Maximum number of SI messages

maxPO-perPF INTEGER ::= 4 -- Maximum number of paging occasion per paging frame

maxAccessCat-1 INTEGER ::= 63 -- Maximum number of Access Categories minus 1

maxBarringInfoSet INTEGER ::= 8 -- Maximum number of access control parameter sets

maxCellEUTRA INTEGER ::= 8 -- Maximum number of E-UTRA cells in SIB list

maxEUTRA-Carrier INTEGER ::= 8 -- Maximum number of E-UTRA carriers in SIB list

maxPLMNIdentities INTEGER ::= 8 -- Maximum number of PLMN identites in RAN area configurations

maxDownlinkFeatureSets INTEGER ::= 1024 -- (for NR DL) Total number of FeatureSets (size of the pool)

maxUplinkFeatureSets INTEGER ::= 1024 -- (for NR UL) Total number of FeatureSets (size of the pool)

maxEUTRA-DL-FeatureSets INTEGER ::= 256 -- (for E-UTRA) Total number of FeatureSets (size of the pool)

maxEUTRA-UL-FeatureSets INTEGER ::= 256 -- (for E-UTRA) Total number of FeatureSets (size of the pool)

maxFeatureSetsPerBand INTEGER ::= 128 -- (for NR) The number of feature sets associated with one band.

maxPerCC-FeatureSets INTEGER ::= 1024 -- (for NR) Total number of CC-specific FeatureSets (size of the pool)

maxFeatureSetCombinations INTEGER ::= 1024 -- (for MR-DC/NR)Total number of Feature set combinations (size of the pool)

maxInterRAT-RSTD-Freq INTEGER ::= 3

maxHRNN-Len-r16 INTEGER ::= 48 -- Maximum length of HRNNs

maxNPN-r16 INTEGER ::= 12 -- Maximum number of NPNs broadcast and reported by UE at establishment

maxNrOfMinSchedulingOffsetValues-r16 INTEGER ::= 2 -- Maximum number of min. scheduling offset (K0/K2) configurations

maxK0-SchedulingOffset-r16 INTEGER ::= 16 -- Maximum number of slots configured as min. scheduling offset (K0)

maxK2-SchedulingOffset-r16 INTEGER ::= 16 -- Maximum number of slots configured as min. scheduling offset (K2)

maxDCI-2-6-Size-r16 INTEGER ::= 140 -- Maximum size of DCI format 2-6

maxDCI-2-6-Size-1-r16 INTEGER ::= 139 -- Maximum DCI format 2-6 size minus 1

maxNrofUL-Allocations-r16 INTEGER ::= 64 -- Maximum number of PUSCH time domain resource allocations

maxNrofP0-PUSCH-Set-r16 INTEGER ::= 2 -- Maximum number of P0 PUSCH set(s)

maxOnDemandSIB-r16 INTEGER ::= 8 -- Maximum number of SIB(s) that can be requested on-demand

maxOnDemandPosSIB-r16 INTEGER ::= 32 -- Maximum number of posSIB(s) that can be requested on-demand

maxCI-DCI-PayloadSize-r16 INTEGER ::= 126 -- Maximum number of the DCI size for CI

maxCI-DCI-PayloadSize-1-r16 INTEGER ::= 125 -- Maximum number of the DCI size for CI minus 1

maxWLAN-Id-Report-r16 INTEGER ::= 32 -- Maximum number of WLAN IDs to report

maxWLAN-Name-r16 INTEGER ::= 4 -- Maximum number of WLAN name

maxRAReport-r16 INTEGER ::= 8 -- Maximum number of RA procedures information to be included in the RA report

maxTxConfig-r16 INTEGER ::= 64 -- Maximum number of sidelink transmission parameters configurations

maxTxConfig-1-r16 INTEGER ::= 63 -- Maximum number of sidelink transmission parameters configurations minus 1

maxPSSCH-TxConfig-r16 INTEGER ::= 16 -- Maximum number of PSSCH TX configurations

maxNrofCLI-RSSI-Resources-r16 INTEGER ::= 64 -- Maximum number of CLI-RSSI resources for UE

maxNrofCLI-RSSI-Resources-1-r16 INTEGER ::= 63 -- Maximum number of CLI-RSSI resources for UE minus 1

maxNrofCLI-SRS-Resources-r16 INTEGER ::= 32 -- Maximum number of SRS resources for CLI measurement for UE

maxCLI-Report-r16 INTEGER ::= 8

maxNrofConfiguredGrantConfig-r16 INTEGER ::= 12 -- Maximum number of configured grant configurations per BWP

maxNrofConfiguredGrantConfig-1-r16 INTEGER ::= 11 -- Maximum number of configured grant configurations per BWP minus 1

maxNrofCG-Type2DeactivationState INTEGER ::= 16 -- Maximum number of deactivation state for type 2 configured grants per BWP

maxNrofConfiguredGrantConfigMAC-1-r16 INTEGER ::= 31 -- Maximum number of configured grant configurations per MAC entity minus 1

maxNrofSPS-Config-r16 INTEGER ::= 8 -- Maximum number of SPS configurations per BWP

maxNrofSPS-Config-1-r16 INTEGER ::= 7 -- Maximum number of SPS configurations per BWP minus 1

maxNrofSPS-DeactivationState INTEGER ::= 16 -- Maximum number of deactivation state for SPS per BWP

maxNrofDormancyGroups INTEGER ::= 5 --

maxNrofPUCCH-ResourceGroups-1-r16 INTEGER ::= 3 --

maxNrofServingCellsTCI-r16 INTEGER ::= 32 -- Maximum number of serving cells in simultaneousTCI-UpdateList

maxNrofTxDC-TwoCarrier-r16 INTEGER ::= 64 -- Maximum number of UL Tx DC locations reported by the UE for 2CC uplink CA

-- TAG-MULTIPLICITY-AND-TYPE-CONSTRAINT-DEFINITIONS-STOP

-- ASN1STOP

|  |
| --- |
| NEXT CHANGE |

9 Specified and default radio configurations

Specified and default configurations are configurations of which the details are specified in the standard. Specified configurations are fixed while default configurations can be modified using dedicated signalling. The default value for the parameters not listed in following subclauses shall be set such as the corresponding features are not configured, i.e. *release* or *false* unless explicitly stated otherwise.

NOTE: The UE applies the default values specified in the field description of ASN.1 parameters only when the parent IE is present. Hence, the UE does not apply all default values in field descriptions when it applies the "default radio configuration" in accordance with this clause.

9.1 Specified configurations

9.1.1 Logical channel configurations

---------------------------------------------------------------ommited text-----------------------------------------------------------

9.1.1.4 SCCH configuration

Parameters that are specified for unicast of NR sidelink communication, which is used for the sidelink signalling radio bearer of PC5-RRC message. The SL-SRB using this SCCH configuration is named as SL-SRB3.

| **Name** | **Value** | **Semantics description** | **Ver** |
| --- | --- | --- | --- |
| PDCP configuration |  |  |  |
| *>t-Reordering* | Undefined | Selected by the receiving UE, up to UE implementation |  |
| *>pdcp-SN-Size* | 12 |  |  |
| RLC configuration |  | AM RLC |  |
| *>sn-FieldLength* | 12 |  |  |
| *>t-Reassembly* | Undefined | Selected by the receiving UE, up to UE implementation |  |
| *>t-PollRetransmit* | Undefined | Selected by the transmitting UE, up to UE implementation |  |
| *>pollPDU* | Undefined | Selected by the transmitting UE, up to UE implementation |  |
| *>pollByte* | Undefined | Selected by the transmitting UE, up to UE implementation |  |
| *>maxRetxThreshold* | Undefined | Selected by the transmitting UE, up to UE implementation |  |
| *>t-StatusProhibit* | Undefined | Selected by the receiving UE, up to UE implementation |  |
| *>logicalChannelIdentity* | 3 |  |  |
| MAC configuration |  |  |  |
| *>priority* | 1 |  |  |
| *>prioritisedBitRate* | infinity |  |  |
| *>logicalChannelGroup* | 0 |  |  |
| >*schedulingRequestId* | 0 | The scheduling request configuration with this value is applicable for this SCCH if configured by the network. |  |

Parameters that are specified of NR sidelink communication, which is used for the sidelink signalling radio bearer of unprotected PC5-S message (e.g. Direct Link Establishment Request, TS 24.587 [57]). The SL-SRB using this SCCH configuration is named as SL-SRB0.

| **Name** | **Value** | **Semantics description** | **Ver** |
| --- | --- | --- | --- |
| PDCP configuration |  |  |  |
| *>t-Reordering* | Undefined | Selected by the receiving UE, up to UE implementation |  |
| *>pdcp-SN-Size* | 12 |  |  |
| RLC configuration |  | UM RLC |  |
| *>sn-FieldLength* | 6 |  |  |
| *>t-Reassembly* | Undefined | Selected by the receiving UE, up to UE implementation |  |
| *>logicalChannelIdentity* | 0 |  |  |
| MAC configuration |  |  |  |
| *>priority* | 1 |  |  |
| *>prioritisedBitRate* | infinity |  |  |
| *>logicalChannelGroup* | 0 |  |  |
| >*schedulingRequestId* | 0 | The scheduling request configuration with this value is applicable for this SCCH if configured by the network. |  |

Parameters that are specified for unicast of NR sidelink communication, which is used for the sidelink signalling radio bearer of PC5-S message establishing PC5-S security (e.g. Direct Link Security Mode Command and Direct Link Security Mode Complete, TS 24.587 [57]). The SL-SRB using this SCCH configuration is named as SL-SRB1.

| **Name** | **Value** | **Semantics description** | **Ver** |
| --- | --- | --- | --- |
| PDCP configuration |  |  |  |
| *>t-Reordering* | Undefined | Selected by the receiving UE, up to UE implementation |  |
| *>pdcp-SN-Size* | 12 |  |  |
| RLC configuration |  | AM RLC |  |
| *>sn-FieldLength* | 12 |  |  |
| *>t-Reassembly* | Undefined | Selected by the receiving UE, up to UE implementation |  |
| *>t-PollRetransmit* | Undefined | Selected by the transmitting UE, up to UE implementation |  |
| *>pollPDU* | Undefined | Selected by the transmitting UE, up to UE implementation |  |
| *>pollByte* | Undefined | Selected by the transmitting UE, up to UE implementation |  |
| *>maxRetxThreshold* | Undefined | Selected by the transmitting UE, up to UE implementation |  |
| *>t-StatusProhibit* | Undefined | Selected by the receiving UE, up to UE implementation |  |
| *>logicalChannelIdentity* | 1 |  |  |
| MAC configuration |  |  |  |
| *>priority* | 1 |  |  |
| *>prioritisedBitRate* | infinity |  |  |
| *>logicalChannelGroup* | 0 |  |  |
| >*schedulingRequestId* | 0 | The scheduling request configuration with this value is applicable for this SCCH if configured by the network. |  |

Parameters that are specified for unicast of NR sidelink communication, which is used for the sidelink signalling radio bearer of protected PC5-S message except Direct Link Security Mode Complete. The SL-SRB using this SCCH configuration is named as SL-SRB2.

| **Name** | **Value** | **Semantics description** | **Ver** |
| --- | --- | --- | --- |
| PDCP configuration |  |  |  |
| *>t-Reordering* | Undefined | Selected by the receiving UE, up to UE implementation |  |
| *>pdcp-SN-Size* | 12 |  |  |
| RLC configuration |  | AM RLC |  |
| *>sn-FieldLength* | 12 |  |  |
| *>t-Reassembly* | Undefined | Selected by the receiving UE, up to UE implementation |  |
| *>t-PollRetransmit* | Undefined | Selected by the transmitting UE, up to UE implementation |  |
| *>pollPDU* | Undefined | Selected by the transmitting UE, up to UE implementation |  |
| *>pollByte* | Undefined | Selected by the transmitting UE, up to UE implementation |  |
| *>maxRetxThreshold* | Undefined | Selected by the transmitting UE, up to UE implementation |  |
| *>t-StatusProhibit* | Undefined | Selected by the receiving UE, up to UE implementation |  |
| *>logicalChannelIdentity* | 2 |  |  |
| MAC configuration |  |  |  |
| *>priority* | 1 |  |  |
| *>prioritisedBitRate* | infinity |  |  |
| *>logicalChannelGroup* | 0 |  |  |
| >*schedulingRequestId* | 0 | The scheduling request configuration with this value is applicable for this SCCH if configured by the network. |  |

9.1.1.5 STCH configuration

Parameters that are specified for NR sidelink communication, which is used for the sidelink data radio bearer.

| **Name** | **Value** | **Semantics description** | **Ver** |
| --- | --- | --- | --- |
| PDCP configuration |  |  |  |
| *>t-Reordering* | Undefined | Selected by the receiving UE, up to UE implementation |  |
| *>pdcp-SN-Size* | 12 | For broadcast and groupcast of NR sidelink communication |  |
| *>maxCID* | 15 | For broadcast and groupcast of NR sidelink communication |  |
| *>profiles* |  |  |  |
| RLC configuration |  | For broadcast and groupcast of NR sidelink communication, uni-directional UM RLCUM window size is set to 32 |  |
| *>t-Reassembly* | Undefined | Selected by the receiving UE, up to Up to UE implementation |  |
| *>sn-FieldLength* | 6 | For broadcast and groupcast of NR sidelink communication |  |
| *>logicalChannelIdentity* | Undefined | Selected by the transmitting UE, up to UE implementation |  |
| MAC configuration |  |  |  |
| *>priority* |  |  |  |

|  |
| --- |
| NEXT CHANGE |

9.3 Sidelink pre-configured parameters

This ASN.1 segment is the start of the NR definitions of pre-configured sidelink parameters.

– *SL-PreconfigurationNR*

The IE *SL-PreconfigurationNR* includes the sidelink pre-configured parameters used for NR sidelink communication. Need codes or conditions specified for subfields in *SL-PreconfigurationNR* do not apply.

***SL-PreconfigurationNR* information elements**

-- ASN1START

-- TAG-SL-PRECONFIGURATIONNR-START

SL-PreconfigurationNR-r16 ::= SEQUENCE {

 sidelinkPreconfigNR-r16 SidelinkPreconfigNR-r16,

 ...

}

SidelinkPreconfigNR-r16 ::= SEQUENCE {

 sl-PreconfigFreqInfoList-r16 SEQUENCE (SIZE (1..maxNrofFreqSL-r16)) OF SL-FreqConfigCommon-r16 OPTIONAL,

 sl-PreconfigNR-AnchorCarrierFreqList-r16 SL-NR-AnchorCarrierFreqList-r16 OPTIONAL,

 sl-PreconfigEUTRA-AnchorCarrierFreqList-r16 SL-EUTRA-AnchorCarrierFreqList-r16 OPTIONAL,

 sl-RadioBearerPreConfigList-r16 SEQUENCE (SIZE (1..maxNrofSLRB-r16)) OF SL-RadioBearerConfig-r16 OPTIONAL,

 sl-RLC-BearerPreConfigList-r16 SEQUENCE (SIZE (1..maxSL-LCID-r16)) OF SL-RLC-BearerConfig-r16 OPTIONAL,

 sl-MeasPreConfig-r16 SL-MeasConfigCommon-r16 OPTIONAL,

 sl-OffsetDFN-r16 INTEGER (1..1000) OPTIONAL,

 t400-r16 ENUMERATED{ms100, ms200, ms300, ms400, ms600, ms1000, ms1500, ms2000} OPTIONAL,

 sl-MaxNumConsecutiveDTX-r16 ENUMERATED {n1, n2, n3, n4, n6, n8, n16, n32} OPTIONAL,

 sl-SSB-PriorityNR-r16 INTEGER (1..8) OPTIONAL,

 sl-PreconfigGeneral-r16 SL-PreconfigGeneral-r16 OPTIONAL,

 sl-UE-SelectedPreConfig-r16 SL-UE-SelectedConfig-r16 OPTIONAL,

 sl-CSI-Acquisition-r16 ENUMERATED {enabled} OPTIONAL,

 sl-RoHC-Profiles-r16 SL-RoHC-Profiles-r16 OPTIONAL,

 sl-MaxCID-r16 INTEGER (1..16383) DEFAULT 15,

 ...

}

SL-PreconfigGeneral-r16 ::= SEQUENCE {

 sl-TDD-Configuration-r16 TDD-UL-DL-ConfigCommon OPTIONAL,

 reservedBits-r16 BIT STRING (SIZE (2)) OPTIONAL,

 ...

}

SL-RoHC-Profiles-r16 ::= SEQUENCE {

 profile0x0001-r16 BOOLEAN,

 profile0x0002-r16 BOOLEAN,

 profile0x0003-r16 BOOLEAN,

 profile0x0004-r16 BOOLEAN,

 profile0x0006-r16 BOOLEAN,

 profile0x0101-r16 BOOLEAN,

 profile0x0102-r16 BOOLEAN,

 profile0x0103-r16 BOOLEAN,

 profile0x0104-r16 BOOLEAN

}

-- TAG-SL-PRECONFIGURATIONNR-STOP

-- ASN1STOP

| ***SL-PreconfigurationNR* field descriptions** |
| --- |
| ***sl-OffsetDFN***Indicates the timing offset for the UE to determine DFN timing when GNSS is used for timing reference. Value 1 corresponds to 0.001 milliseconds, value 2 corresponds to 0.002 milliseconds, and so on. If the field is absent, no offset is applied. |
| ***sl-PreconfigEUTRA-AnchorCarrierFreqList***This field indicates the EUTRA anchor carrier frequency list, which can provide the NR sidelink communication configuration. |
| ***sl-PreconfigFreqInfoList***This field indicates the NR sidelink communication configuration some carrier frequency(ies). In this release, only one *SL-FreqConfig* can be configured in the list. |
| ***sl-PreconfigNR-AnchorCarrierFreqList***This field indicates the NR anchor carrier frequency list, which can provide the NR sidelink communication configuration. |
| ***sl-RadioBearerPreConfigList***This field indicates one or multiple sidelink radio bearer configurations. |
| ***sl-RLC-BearerPreConfigList***This field indicates one or multiple sidelink RLC bearer configurations. |
| ***sl-RoHC-Profiles***This field indicates the supported RoHC profiles for NR sidelink communications. |
| ***sl-SSB-PriorityNR***This field indicates the priority of NR sidelink SSB transmission and reception. |

|  |
| --- |
| END OF CHANGES |